



GIZ Energy Programme Indonesia/ASEAN

Strategic Theme: Industry Decarbonisation

Purpose & Relevance

Indonesia, ASEAN's largest economy, targets 8% annual GDP growth and full industrialisation by 2045 under Vision 2045. Rapid economic growth and urbanisation will triple energy demand by 2060, while energy intensity remains high. Industry is central to the economy—contributing around 19% of GDP, over 70% of exports, and a quarter of national emissions in 2022—making decarbonisation critical. Major emitting sectors include cement, steel, textiles, and food and beverages, largely due to high energy consumption. To support a green economy, Indonesia's NDC targets a 9 MtCO_{2e} reduction in industrial emissions, yet uptake of energy efficiency and low-carbon technologies remains limited. Industry leaders are beginning to act as first movers, driven in part by global supply-chain pressures such as Carbon Border Adjustment Mechanisms (CBAM).

Government Targets

Indonesia aims to reach net-zero emissions by 2060 or sooner and targets a 34.3% renewable energy (RE) share by 2034 under the National Electricity Plan (RUPTL). Furthermore, Indonesia is part of the Just Energy Transition Partnership (JETP), of which Germany holds the co-leadership. The Ministry of Energy and Mineral Resources (MEMR) has announced the Roadmap for Energy Sector Decarbonisation by 2060, which highlights the need to decarbonise industries, both in power generation as well as energy-intensive industries. In October 2023, the Ministry of Industry (MoI) announced an additional advanced Net Zero Emissions (NZE) target for all industries by 2050. Indonesia furthers aims to increase energy efficiency by 17% in 2025 and has introduced the Presidential Regulation 33/2023 that stipulates mandatory energy management and energy auditing as instruments to increase efficiency in energy intensive industries and the built environment.

Our Strategic Partners

Government Partners:

Ministry of Energy and Mineral Resources (MEMR) as political partner and the subordinated Directorate General of Renewable Energy and Energy Conservation (DG EBTKE) as implementation partner on industry decarbonisation, which is responsible for upscaling the use of RE and wide application of energy conservation measures and strategies across all industries. **Ministry of Industry (MoI)** for setting industrial standards for energy use and supply (Centre for Green Industry; others) **Ministry of Marine Affairs and Fisheries (KKP)** for the development of solar cold chains across industrial cold storages.



Other implementation partners:

GIZ also works closely with local and international research organisations, as well as industry associations to seek potential industry champions for decarbonisation.



Achievements

- Established manufacturing of new, climate-friendly cooling technologies with Indonesian industry. **Two innovative, GHG-emission-free ice factories** in the fishery sector were financed and built.
- To encourage a holistic approach and improve coordination on energy efficiency measures for fisheries and cold chains, **a national task force consisting of the three Indonesian ministries, industry associations, academia and research institutions has been created.**

On behalf of:

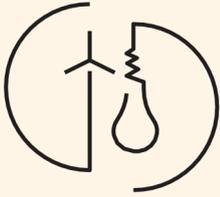


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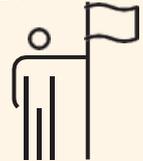


Our Approach

- Policy advisory for MEMR, MoI and KKP on energy efficiency and renewable energy for industry
- Capacity building for corporates on energy management and the financial sector on sustainable energy finance
- Matchmaking between private sector stakeholders/industries, technology providers and investors
- Energy audits and techno-economic pre-feasibility studies
- Demonstration projects/first movers: Industry Champions, NZE City Pioneers, and Solar Cold Storages and related Supply Chains

Our Mission

GIZ supports Indonesia's green economic transformation and industrial decarbonisation through the integrated application of renewable energy and energy efficiency.



Our Projects

The following projects within the Programme support the theme of "Industry Decarbonisation", and contribute to enable net-zero power systems by 2050:

- **Sustainable Energy Transition in Indonesia (SETI):** Lisa Tinschert, Project Lead (lisa.tinschert@giz.de); Johannes Anhorn, Implementation Manager (johannes.anhorn@giz.de); 15M EUR; 2022-2028, IKI
- **Strategic Exploration of Economic Mitigation Potentials through Renewables (ExploRE):** Ardian Candraputra, Project Lead (ardian.candraputra@giz.de); 5.35M EUR 2018-2025, IKI
- **Solar Cold Chains for a Green Economy in Indonesia (SOCOOL):** Frank Stegmüller, Project Lead (frank.stegmueller@giz.de); 5M EUR; 2023-2026, BMZ
- **RE2Cool / Green Energy:** Frank Stegmüller, Implementation Manager (frank.stegmueller@giz.de); 4M EUR, 2025-2029, BMZ

Outlook – What's Coming Next

- More capacity development and technical assistance delivered (e.g., energy audits, pre-feasibility studies), including published success cases
- Company commitments to CO₂ reduction and net-zero strategy implementation
- Number of international technology partnerships across research, industry, and academia
- Partner contributions leveraged, measured in monetary contributions
- CO₂ emissions mitigated (tons)

Contact Points

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GIZ Strategic Themes:



Industry Decarbonisation



Island Energy Solutions



Power System Transformation



Just Energy Transition



Sustainable Energy Finance